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THE CONTRIBUTION OF STRUCTURAL LINGUISTICS TO THE TEACHING OF READING, WRITING, AND GRAMMAR IN THE ELEMENTARY SCHOOL.

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THE PROBLEM OF THIS STUDY WAS TO SEARCH THE WRITINGS OF RECOGNIZED LINGUISTS, PARTICULARLY THE STRUCTURAL LINGUISTS, TO DISCOVER WHAT THEY OFFER WHICH CAN BE APPLIED IN THE ELEMENTARY SCHOOL TO IMPROVE THE TEACHING OF THE READING, WRITING, AND GRAMMAR PORTIONS OF THE LANGUAGE ARTS CURRICULUM. THREE PROJECT CONFERENCES WERE HELD - TWO WITH LINGUISTS AND ONE WITH SUPERVISORS OF SELECTED ELEMENTARY SCHOOL SYSTEMS. IT WAS CONCLUDED THAT FEW OF THE LINGUISTS HAVE GIVEN SPECIFIC ATTENTION TO THE NEEDS OF THE ELEMENTARY LEVEL, YET IN THEIR OFFERINGS ARE IDEAS WHICH APPEAR APPLICABLE. THOSE WHICH SEEMED MOST PROMISING ARE INCLUDED IN THIS REPORT. AREAS IN WHICH THE HELP OF LINGUISTS IS NEEDED ARE PRESENTED. THE REPORT ALSO SUGGESTS SOME SPECIFIC RESEARCH PROBLEMS IN LINGUISTICS AND PROVIDES SELECTED REFERENCES AND ARTICLES WHICH SHOULD BE USEFUL FOR THE ELEMENTARY TEACHER. (JC)

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BULLETIN of the
SCHOOL OF EDUCATION
INDIANA UNIVERSITY

The Contribution of Structural Linguistics to the Teaching of Reading, Writing, and Grammar in the Elementary School

by
RUTH G. STRICKLAND

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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Ruth G. Strickland

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Ruth G. Strickland received her B.S. degree in 1925 and her A.M. degree in 1932 from Teachers College, Columbia University, and her Ph.D. degree in 1938 from Columbia University. She taught in kindergarten through grade 6 in Duluth, Minnesota, for five years and then did demonstration teaching and supervision at New York State Teachers College (Geneseo) and Washington State Teachers College (Bellingham). She also did demonstration teaching in summer sessions at Wellesley College, Horace Mann School at Teachers College, and Ohio State University. She taught at Temple University from 1932 to 1937, and was Director of Elementary Education at Kansas State Teachers College (Emporia) from 1937 to 1939. She joined the faculty of the School of Education in 1939 and has been Professor of Education there since 1950.

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Dr. Strickland was Book Review Editor for Childhood Education in 1951-1953; was chairman of the Research Committee of the Association for Childhood Education International in 1949-1951; was president of the National Conference on Research in English in 1954; and was president of the National Council of Teachers of English in 1960.

Among Dr. Strickland's writings are the following:

The Language and Mental Development of Children, Bulletin of the School of Education, vol. 23, no. 2, Indiana University, Bloomington, March, 1947, 31 pp.

English Is Our Language, Guide for Grades 1 and 2, D. C. Heath and Company, Boston, 1950.

The Language Arts in the Elementary School, D. C. Heath and Company, Boston, Second edition, 1957.

The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, vol. 38, no. 4, Indiana University, Bloomington, July, 1962, 131 pp.

(With others) Language Arts for Today's Children, Volume II, Commission of National Council of Teachers of English, 1954.

Numerous articles for the following periodicals:

Bulletin of the School of Education
Childhood Education
Educational Leadership
Elementary English
Journal of Education
The Reading Teacher

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THE CONTRIBUTION OF STRUCTURAL LINGUISTICS TO THE TEACHING OF READING, WRITING, AND GRAMMAR IN THE ELEMENTARY SCHOOL

The Problem

The elementary schools of the United States bear the responsibility for providing all children with the tools which are essential for later schooling and for a lifetime of learning. Obviously, ability to use the English tongue effectively in all essential human enterprises is, in our society, a universal need. The schools have always assumed responsibility for expanding and refining children's understanding and use of their language, but results have never been wholly satisfactory. The needs of the times call for a higher level of literacy for a far larger proportion of the population than the schools have yet achieved. Also, the pressure of time to learn all that needs to be learned is such that literacy must, if possible, be achieved more rapidly.

If the teaching of English is to be improved, it is logical to turn for help to the scholars who know most about the language itself, the linguists who have spent years in the study of language in general and of the English language in particular. They, the psychologists who have studied the learning process and the scholars whose main concern is the literature which represents the high potential of the language, should all be drawn upon as resources for the improvement of English in the schools. This study was designed to draw from the work of the linguists the ideas and suggestions which appear applicable to elementary education.

The National Council of Teachers of English, in The National Interest and the Teaching of English: A Report of the Status of the Profession,[1] quotes from an address of the late Professor Leonard Bloomfield, founder of the Linguistic Society of America, to substantiate its appeal for more and better study of the language:

> Our schools are conducted by persons who, from the professors of education down to teachers in the classroom, know nothing of the results of linguistic science, not even the relation of writing to speech, or of standard language to dialect. In short, they do not know what language is, and yet must teach it, and in consequence waste years of every child's life and reach a poor result.[2]

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[1] The National Interest and the Teaching of English, The National Council of Teachers of English, Champaign, Illinois, 1961.

[2] Bloomfield, Leonard, "Why a Linguistic Society?" Language 1:5, 1925.

In May of 1963, The Modern Language Association called a conference to discuss a problem closely related to the one which troubled Bloomfield. In view of the fact that many young people now in the schools will be called upon in the course of their lives to learn a foreign language and do it rapidly in order to serve government, religious, philanthropic, or business interests in many parts of the world, the question before the conference was, "When and how can linguistic concepts be introduced into English teaching at the earliest possible age?"

Further evidence of the concern the linguists feel for the teaching of the language was a conference held at Indiana University in January of the same year. Twenty-three linguists and psychologists and two specialists in reading spent several days discussing the beginning stages of reading; specifically, how to help children most quickly and effectively to "crack the code" of English reading so that they could turn the stimulus of the print on a page into speech and thence, of course, into meaning.

These conferences are only two of a number of sources of evidence that the linguists themselves are cognizant of the problems faced by the schools in developing in all children the literacy and understanding of language that is needed to meet the requirements of life in this fast-moving century. The linguists, however, are scholars who know more about language and how it operates than they do about children and how they learn language. A drawing together of the teachers and leaders who understand the problems of teaching children and the linguists who know most about the language to be taught is a logical approach to improvement. However, the problem of improvement has many facets; this study was designed to give attention to a few of these.

The Purpose of the Study

The problem of this study was to search the writings of recognized linguists, particularly the structural linguists, to discover what they offer that can be applied in the elementary school to improve the teaching of the reading, writing, and grammar portions of the language arts curriculum. The study was based on the following hypotheses:

1. The unsatisfactory quality of much of the present-day reading and writing in the elementary school may be due in part to lack of understanding of the true structure of English on the part of teachers and leaders.

2. The Latin grammar superimposed on English in the eighteenth century may be, as linguistic scholars maintain, a hindrance to the teaching and learning of good spoken and written English.

3. The scientific studies of the English language by the structural linguists may hold values which can be drawn upon and applied in the elementary school.

4. Since the recognized structural linguists appear to the uninitiated to be individualists, each going his own way in terms of both his research and the vocabulary in which it is presented, the reports of their work need to be studied analytically and synthetically by the people outside the field who need to use their offerings.

5. The values for elementary education inherent in this material need to be discovered by people who know elementary education and the language-learning process; applications of these discoveries need to be interpreted, tested, and evaluated by people conversant with this field who can serve as "middle men" between the linguists and the teachers of children.

This study had four major objectives:

1. To find a way to draw from the scattered mass of research material dealing with the English language that portion which will be helpful to elementary teachers

2. To discover, through intensive combing of the literature, what efforts in this direction, if any, have been made by other people in elementary education and what values they present

3. To delineate, on the basis of these findings, some areas of needed research

4. To propose actual studies which must be carried on in elementary school classrooms to test the values of the findings and hypotheses presented.

The interest which led to this study grew out of a three-year study at Indiana University which is reported in the bulletin entitled The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children.[3] The results of the study point toward elements in the field of linguistics which appear highly valuable for the elementary school. In this three-year study, recordings of the speech of 575 children, in grades 1 through 6, were analyzed by a linguistic scheme devised at Indiana University and refined and validated by a conference of linguists.[4]

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[3]Strickland, Ruth G., The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, vol. 38, no. 4, Indiana University, Bloomington, Indiana, July, 1962.

[4]Ibid., pp. 17-22.

The areas for study in the language arts field--reading, spelling, and grammar--were chosen because it is clear that they are problem areas. Each has been given enormous space in educational journals, and special books have been written on each of them. A list of the titles of research studies done in this century on reading, spelling as a necessary skill for writing, and grammar would fill many pages. Practically all of these have been contributed by people in education who were intimately concerned with children and the schools but were not scholars in the field of language. In spite of this tremendous output, basic problems remain unsolved, as witness the number of reading clinics in the country and the need for far more of them, as well as the constant barrage of criticism hurled at the schools by parents and others who find too many children who cannot read or write, and the college professors who complain that their students know no grammar and little or nothing of literature.

The Plan of the Study

The core of the work was intensive study of the literature of linguistics, particularly structural linguistics as applied to English.[5] The study was shaped and supplemented by three project conferences, two with linguists and one with supervisors of selected elementary school systems, and also by attendance at several related conferences not directly connected with the study.

The first step in the study consisted of wide reading in the field of linguistics to select the publications which appeared to offer most in the way of basic concepts of language and the structure of English which could be applied or adapted to work in elementary language arts.[6] After the possibilities had been narrowed to those which seemed most fruitful, the next step was the rereading and analysis of the references to select the elements to be studied intensively. Most of this work was done in books written by recognized American linguists. A considerable number of articles in periodicals and a few related books suggested possible applications.

Early in the work of the project, September, 1962, a planning conference[7] was held. Four linguists and two elementary school supervisors spent two days discussing with the project staff the direction the study should take, the resources available, and the ideas considered by the consultants to be most applicable.

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[5]Robert B. Ruddell, now Assistant Professor of Education at the University of California, Berkeley, served as assistant for the project.

[6]The bibliography of references included in this search appears at the end of this report.

[7]See Appendix A for a list of conference participants.

After several months of independent work, a second conference[8] was held in March, 1963. The participants were seven elementary supervisors and directors of curriculum who work intimately with teachers to improve the teaching of the language arts in their schools. The purpose of this conference was to share with leaders who know the problems in the teaching of reading, spelling, grammar, and composition some of the possibilities emerging from this study. Two days were spent in analyzing the current patterns of work in these areas as they appear in textbooks and classroom teaching and in discussing values which might accrue and changes which might be made to implement some of the possibilities in the field of linguistics.

The final conference, in May, again brought together the participants of the September conference to consider the application of linguistic principles and content to the basic work of the elementary school. This was a time for correcting misconceptions, arriving at some consensus regarding basic curriculum, and suggesting the scope and possible sequence of application. Consideration was also given to ways of bringing about further cooperation between linguistic scholars and the practitioners in the schools.

Finally, it was the task of the director to draw from these sources of challenge, information, inspiration, and guidance the concepts from the field of linguistics which can be presented to elementary teachers and curriculum makers for their consideration and, hopefully, their implementation in the curriculum of the schools. It will be their task to study what is suggested in the light of their knowledge of children and how they learn as well as in the light of the children's need for understanding of their language and skill in using it.

Language and the Linguists

Language is variously defined by the linguists and their interpreters. The following definition by Hill is cumbersome but comprehensive.

> Language is the primary and most highly elaborated form of human symbolic activity. Its symbols are made up of sounds produced by the vocal apparatus, and they are arranged in classes and patterns which make up a complex and symmetrical structure. The entities of language are symbols, that is, they have meaning, but the connection between symbol and thing is arbitrary and socially controlled. The symbols of language are simultaneously substitute stimuli and substitute responses and can call forth further stimuli and responses, so that discourse becomes independent of an immediate physical stimulus. The entities and

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[8]See Appendix A for a list of conference participants.

> structure of language are always so elaborated as to give the speaker the possibility of making a linguistic response to any experience. Most of the above can be paraphrased by saying that every language is a model of a culture and its adjustment to the world.[9]

Language, then, is a set of sounds. The connection between the sounds and objects in the outside world is purely arbitrary. Since this is true, the connection is also changeable and unpredictable. Language is systematic. Sounds are put together in recurrent designs such that, if one hears part of the design, he can often predict the whole of it. Any sentence pattern is like a frame in which other words can be substituted for those used without changing the frame. Language is also complete. It is, in every instance, sufficiently elaborated that its speakers can respond to any experience they may encounter.[10]

Since the realm of the linguist is the whole of language, his major aims, according to Ives, "are the discovery of the principles true of all living languages and the accumulation of detailed and systematic descriptions of the phonology and grammar of these languages."[11]

The structural linguist, on whose work this study draws, "is primarily interested in discovering and describing as concisely as possible the interrelationships and patterns which make up the intricate structures of language."[12] The central concept of all linguistic analysis is structure. The linguist analyzes the ordered or patterned set of contrasts or oppositions he can discover in a language, "whether in units of sound, the grammatical inflections, the syntactical arrangements, or even the meaning of linguistic forms."[13]

Any existing language, then, "is an arbitrary system of articulated sounds made by a group of human beings as a means of communicating in carrying on the affairs of their society."[14] The system is learned by each oncoming generation, which accepts the bulk of the language as it receives it, though new experiences and new needs may result in new word coinages and slight modifications in details of structure and meaning.

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[9]Hill, Archibald A., Introduction to Linguistic Structures, Harcourt, Brace and Company, New York, 1958, p. 9.

[10]Ibid., pp. 3-8.

[11]Ives, Sumner, "Linguistics in the Classroom," College English 17:165, December, 1955.

[12]Francis, W. Nelson, The Structure of American English, The Ronald Press Company, New York, 1958, p. 26.

[13]Carroll, John B., The Study of Language, Harvard University Press, Cambridge, Mass., 1950, p. 14.

[14]Francis, W. Nelson, op. cit., p. 13.

Any language may be fringed about by dialects, each dialect being the specific variety of the language employed by a single homogeneous speech community. The language itself may be a composite of overlapping dialects, just as a dialect is the composite of the overlapping speech habits of the individuals of the community.[15]

The ideas expressed in the material which follows have been drawn from many sources, but particularly from the work of the structural linguists. For the ideas selected and the suggestions for their application to the work of the schools, the researcher assumes full responsibility.

What Children Can Learn About Language

In his significant book, The Process of Education,[16] Bruner states the conviction of a group of scholars that any significant concept which children in our society need to learn can be taught in some honest form to all age levels. On the basis of this conviction, it is proposed that elementary school children, beginning in the kindergarten or first grade, can be helped to develop the following concepts about language:

1. Language is a system of sounds.

2. The sounds convey meaning only when put together in patterns of words and sentences.

3. The patterns of sound convey meaning to the initiated--those who know the language.

4. Pitch, stress, and juncture are a part of the sound system of the language and help to convey meaning.

5. The sounds and their connection with the things they represent is purely arbitrary.

6. The sounds are put together in characteristic designs; those designs can be composed of a great variety of appropriate fillers.

7. A language changes; old words may be given new meanings and new uses.

8. Likewise, old words are dropped and new words are coined of

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[15]Malmstrom, Jean, and Ashley, Annabel, Dialects--U.S.A., National Council of Teachers of English, Champaign, Ill., 1963.

[16]Bruner, Jerome S., The Process of Education, Harvard University Press, Cambridge, Mass., 1960.

old parts to represent new meanings or modifications of old ones.

The day-by-day work in any classroom abounds in opportunities to introduce and to reinforce these concepts. To do so, a teacher must have a clear understanding of language and of the concepts to be taught. In the paragraphs which follow, examples are suggested of points at which the concepts might function and ways in which they might be introduced.

The first four concepts could be developed together in a variety of situations. Young children would be particularly intrigued to learn that the dog they were discussing and calling in English "the dog," would in French be called, "le chien"; in German, "der Hund"; in Spanish, "el perro." The words "thank you" that the children try to remember to say might be "danke schön" or "merci" in another language but would carry the same meaning. Learning to count to ten in more than one language would delight many children. Even elementary knowledge of another language can be put to use at many points if the teacher sees value in doing so.

As children go afield in the social studies, they encounter many place names borrowed from other languages, particularly in the United States, from the American Indian languages. Attention can be called to these and to the vast number of common name words that have been borrowed from other languages and applied to appropriate objects in the English speaking world.

Some of the stories that delight American children have been translated from other languages. Favorites in the primary grades are the French stories of the elephant, Barbar, and the Swedish story of "Pelle's New Suit." Knowledge that these were first written in another language and translated into the children's own language would help to reinforce the concept of language as an arbitrary system of sounds and meanings held in common by a speech community. The Japanese, Germans, French, and many other groups tell their children almost identical folk stories. Teachers who can do so often teach children to sing "Frère Jacques" or "On the Bridge of Avignon" in French or the first stanza of "Silent Night" in German. Occasionally, verses can be learned in the language of their origin. Upper grade children can build a glossary of Spanish words as they study the countries of Latin America. In the course of this, attention can be called to the fact that a sound which occurs in another language may be foreign to English, as is true of the German umlaut sound. In all of the sciences, a word in his own language applied by a researcher to a new process or product he has achieved is carried over into many languages and spoken with the sound and intonation patterns of those languages. The language of science is drawing the scientists of the world closer together. Children may have occasion to take note of this fact.

In an increasing number of elementary schools there are systematic programs for the teaching of one or more foreign languages. Where this is not true, the teachers can introduce children to the existence

of other languages by a number of incidental means. All of this helps to build and to reinforce basic concepts of language.

Concept number five in the list, the fact that the sounds of a language are put together in characteristic designs, will be given fuller attention in the section of this report dealing with grammar. Here, it may suffice to say that children could learn sentence design by taking a kernel sentence, an irreducible minimum such as, "The boy made" or "Tom bought," and adding to it elements of expansion denoting object, time, place, manner, and cause, and discovering how meaning and emphasis are influenced by the position of these parts in the sentence.

While pitch, stress, and juncture will be referred to later, their function should be explained here. Children's attention can be called to the fact that the same words can be used to convey different messages. "When do you expect him?" is not the same question as "When do you expect him?" The sentence "While we were eating the baby cried for attention" requires a pause after the word eating lest the baby appear to be a part of the menu. Children can learn by ear the role played by pauses of varying degree in designating the words that need to be clotted together or held apart to make sense. Also, they can distinguish by ear the end of a sentence because of the falling intonation of a statement and the rising intonation of a question, followed in each case by a distinct pause.

The fact that language changes comes to light at many points. Some of the words in the Mother Goose rhymes are old words, rarely if ever used by most people today. Jack and Jill "fetch a pail of water"; Miss Muffet sits on a "tuffet" which the children would probably call a "footstool." Folk stories bring to light other old words, as do some favorite poems of childhood.

In the mind of a modern child, the word "capsule" is associated with the object in which John Glenn circled the earth, yet this is a very recent association for the word. Scarcely a week passes in which no new word, meaning, or association comes to light. Aviation, space research, medicine, and many other fields spawn new words continuously.

Most of the new words added to the language to meet new needs are made from old parts that are recognizable. The noun "telstar" and the adjective "supersonic" are clearly in that category. Children could be encouraged to become language sleuths, constantly on the alert for additions and changes in the vocabulary of English and the uses to which it is put. Obviously, the more a teacher knows of the history of English and the better her background in language in general, the richer she can make this experience for children.

Linguistics and the Teaching of Reading

A number of linguists have become vitally interested in the teaching of reading. They are convinced that their knowledge of

language in general, and the sound system of English in particular, can be put to use in the schools to help children learn to "crack the code" of English and do it more rapidly.

The linguist's concept of reading is not the concept commonly held by the classroom teacher and the reading specialist--that reading is getting meaning from the print on a page. The linguist conceives the reading act as that of turning the stimulus of the graphic shapes on a surface back into speech. The shapes represent speech; meaning is not found in the marks but in the speech which the marks represent. In the eyes of the linguist, a child can read when he can recognize symbol-sound correspondence to the point that he can respond to the marks with appropriate speech. The linguist recognizes that the school cannot stop here. The rest of what the school calls teaching reading is actually teaching thinking with and in response to what is found on the page.

Speech sounds are represented in writing by arbitrary graphic shapes. An alphabet is a set of graphic shapes which represent speech sounds in a fairly nearly one-to-one relationship. The sounds of English are represented in writing by the 26 letters of the Roman alphabet, though the language actually utilizes more than 26 sounds. A grapheme is a significant unit of graphic shape and a phoneme is a significant unit of speech sound. Mastery of the correspondence between the phonemes (sound symbols) of the language and the graphemes (graphic symbols) used to represent them is essential to the carrying on of the reading process. The task of learning to read, therefore, is the task of developing recognition responses to sets of patterns of graphic shapes.

Large numbers of English words are spelled in a regular manner, that is, the grapheme-phoneme correspondence is reliable. Some English words which may have been regularly spelled at an earlier period have changed their pronunciation so that the spelling is no longer a one-to-one symbol-sound correspondence. The word "knight" is an example of this and so are many of the words borrowed from other languages.

If children are to learn symbol-sound or grapheme-phoneme correspondences rapidly and efficiently, their first experiences with written words should be with words which are regular in spelling. There should be one sound for one letter until that is learned. Irregularly spelled words should be added later, and those in which correspondence is completely unpredictable and irregular should be encountered last.

That such a logical system is not utilized in the preprimers of widely used reading textbook series is clear. In one series, the vocabulary of the first preprimer includes the words "Susan," "airplane," and "father," with "a" in three different forms. In another the vocabulary of the first preprimer includes "Jane," "Ann," and "plays." In a third series the first preprimer includes the sounds of "a" in "Sally," "Jane," "father," and "ball." Linguists hold that learning correspondences is made unnecessarily difficult by the introduction of confusion rather than orderly systematic progression. There is logic in this contention. To the linguist, the eclectic method of the basal

readers fails to take account of stages in the process of learning to read, and this makes little sense to him.

Two recent books on the teaching of reading present schemes based on this hypothesis. The first to appear was the book, Let's Read,[17] in which Barnhart presented the plan of the late Leonard Bloomfield. The other is Charles Fries' Linguistics and Reading.[18] Both books are based on the concepts just delineated, though there are differences in approach, organization, and methodology. A third linguist, Henry Lee Smith, Jr., is working on materials for children built on a linguistic plan. He has produced no book for teachers, but his point of view is set forth in a series of films entitled Language and Linguistics.[19] Three films which would be particularly helpful to the teacher of reading are the ones entitled The Alphabet, Language and Writing, and Linguistic Science and the Teaching of Reading.

All three of the linguists who have entered the field of reading, and some of the critics who have not appear in agreement that in present basal reader plans, grapheme-phoneme correspondences are treated as only one of a number of seemingly equally important clues for unlocking the identity of words. To them, this ignores the importance of the basic concept that needs to be taught, namely, that the writing is alphabetic and that the sets of graphic shapes represent speech sounds and patterns.

In an article he wrote for The Elementary English Review in 1942, Leonard Bloomfield set forth his concept of what the teaching of reading might be if based on linguistic principles. Clarence Barnhart, in the book Let's Read, presents in 245 lessons a program of reading based on Bloomfield's work. The program begins with mastery of the alphabet, so that the child can name both capital and lower case letters accurately and confidently before beginning work with words. The first 36 lessons present the five vowels in two- and three-letter words, using only the "short" sound of each vowel. The content is lists of words and sentences such as "Nan can fan Dan." and "A fat cat ran at a fat rat." Consonant blends, pairs of vowels, and common irregular spellings are fed into the scheme after children have mastered the earlier lessons. It is a systematic scheme of teaching symbol-sound correspondences with constant use of oral reading. There is no emphasis on reading for meaning and little or no story content until the child has had many lessons on correspondences. The process is solely that of turning the stimulus of the graphic shapes into speech. When the child can do this, he can read.

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[17]Bloomfield, Leonard, and Barnhart, Clarence L., Let's Read, A Linguistic Approach, Wayne State University Press, Detroit, 1961.

[18]Fries, Charles C., Linguistics and Reading, Holt, Rinehart, and Winston, Inc., New York, 1963.

[19]Produced by the University of Buffalo in conjunction with the National Educational Television and Radio Center.

Fries has set forth in his book, Linguistics and Reading, what he believes to be a linguistically sound approach to reading. His goal is to help the child learn to respond to language signals represented by constrastive spelling patterns just as efficiently as he has learned to respond to language signals represented by contrastive sound patterns of speech. He has tried to exclude everything not essential to the task of learning symbol-sound correspondences, so that full attention can be concentrated on the one task. Concurrent learning of new words, grammatical structures, or meanings is ruled out, as is any attention to writing.

During this transfer stage the first set of recognition responses to be established are those for the 26 letters of the English alphabet. The goal is high-speed recognition with complete accuracy. Here he uses only the capital letters, as simply written as possible, moving from single letters to groups of two or three which call attention to contrasting shapes, with no attention to words or meanings.

The second set of responses which must be made automatic are responses to the major spelling patterns of English. The spelling patterns begin with the simple vowel-consonant, consonant-vowel-consonant patterns. Attention is called through grouping and contrasts to the consonant sounds in words in which the sound for a letter is always the same sound. This is the stage of learning to respond to "bundles" of graphic shapes with practice until response is automatic. Certainly this involves the skill of "look-say," but with attention centered on grapheme-phoneme correspondences.

The last stage of developing ability to read comes, Fries says, when the reading process has become so automatic that it can be put to use for vicarious experience, the assimilation of ideas, appreciation, and all the other purposes usually stated for the teaching of reading.

Henry Lee Smith, Jr., in contrast to Fries, would start children with sight words learned in meaningful contexts, then turn to reading material which is planned to teach recognition of correspondences and spelling patterns through simple stories of animals and the type of repetition found in the usual preprimer. The major difference, however, lies in the fact that in Smith's material a letter has only one sound until the child has learned to recognize it in a variety of words of similar spelling. A few irregularly spelled words are added as needed for story action.

These three proposals for a linguistically based method of teaching reading are a start in what may prove to be a highly significant direction. At present, teachers recoil against the dullness and meaninglessness of it in spite of its logic. They want children to love reading and to approach each step of it with eager interest. The suggestions now available from the linguists scarcely fit this psychological need as teachers see it.

But others besides the linguists are turning their attention to the beginner. There is a spate of new books designed to interest him in reading. While the author of the Dr. Seuss Beginner Books is

unquestionably a better authority on child humor and fantasy than on linguistics, he has so far caught the idea behind the program of the linguists that his collaboration with them might conceivably produce scientifically sound material which also meets the psychological needs of the beginner in reading.

The augmented Roman alphabet produced by Sir James Pitman to be used as an Initial Teaching Medium represents an effort to shape an alphabet that has a symbol for each of the basic 43 or 44 sounds of English. Linguists may or may not like his product and its use, but they should look with understanding and appreciation on his effort to meet a basic need--a need of which they are keenly aware. Pitman and Downing, his spokesman, do not conceive of their augmented alphabet of 43 letters or symbols as a teaching method but rather as a medium with which teachers may use any methods they choose. Once a child has mastered the symbols and the sounds they represent, he is ready to read any material available in the medium. It is claimed that children make the transfer to the 26 letters of standard English orthography with little awareness of difference and many children do it within the first year.

Linguists, other than Bloomfield, Fries, and Smith, have given little attention in their writing to the problem of teaching children to read, though, as a result of present concern for teaching reading more rapidly and effectively, several are now giving thought and time to it. Those who have done so recognize their need to know more about how reading is taught and the kinds of problems teachers encounter in teaching reading. It is difficult for anyone not familiar with the work of the first grade to recognize the differences that lie within six-year-old children--differences in mental maturity, background, sensory powers, and neurological structure and their manifestations. The closer any scholar comes to the actual teaching arena, the less dogmatic he tends to become with regard to how to teach reading.

This does not stand in the way of educators who are willing to draw upon the linguists' knowledge of languages for what to teach and the sequence in which it might well be taught. Here is where the scholar who knows the structure of the language and how it operates can be most helpful. The need at the present time is for the linguists to provide clear statements of the sound and spelling patterns to be taught and the sequence for teaching based on regularity of pattern, frequency of occurrence, and general utility in reading.

The help of the dialectologist is needed as well. While speakers of American English understand one another without difficulty, speech sounds are not produced in the same way by all educated speakers from Massachusetts and Georgia to Minnesota and California. Teachers may need help to make the adjustments necessary to respect regional differences which are unique in pattern but not substandard in quality.

All of the preceding discussion is pointed toward the beginning stages of learning to read. A suggestion found in the writings of Lloyd and Warfel is also pertinent. In order to comprehend what he reads, the reader turns the visual stimulus of written language back

into speech--overtly if he is inexperienced and immature, subliminally if he is a rapid, experienced reader. Because this is true, the more clearly the reader understands the patterning of his language, the better will be his oral reading interpretation and his silent reading comprehension. A person whose oral reading is poor may read poorly because he cannot deal quickly and effectively with the code and therefore cannot decipher the words. Often, however, this is not the problem, or not the only one. He may be unable to convert what he gleans from the page into normal speech. Children sometimes fall into the habit of saying the words one by one with equal stress, as though putting beads on a chain. This may prove to be a real danger for children taught by the methods of Bloomfield or Fries, though perhaps it can be avoided. Older children may mutilate content because they do not sense which words must be clotted together as a meaning unit and which held apart. Understanding the function and operation of pitch, stress, and juncture helps children to turn what they read into the flowing, meaningful patterns of normal speech and, through t process, to gain the full component of meaning. Understanding subje and predicate patterns and patterns of elaboration and subordination is also necessary in order to recognize and respond to the signals on the page. Suggestions made in a later section on grammar will function here. Help with reading by patterns, and quantities of reading for practice, should help many children with comprehension in their silent reading and with interpretation in oral eading.

The quality of a child's speech appears closely related to the quality of his oral and silent reading. Children who use with ease all the kinds of sentences found in their reading matter appear to read better than children who do not.[12]

Linguistics and Spelling

The English alphabet is phonemically based, but it is not a truly phonemic alphabet because it does not have a letter for each phoneme. This fact complicates the problem of spelling to such an extent that a number of people throughout the years, George Bernard Shaw among them, have been convinced that English spelling should be simplified, that is, made more nearly phonemic, through the arbitrary enactment of change. Since a perfect phonemic alphabet has a letter for each sound, and since many dialect differences exist among the English-speaking peoples, particularly those of the British Isles, Australia, and the United States, one wonders whether such attempts carried to logical conclusions might create a variety of forms of written English reminiscent in a sense of the Biblical Tower of Babel. But such attempts have never succeeded, so teachers must continue to teach conventional spelling. As matters stand, English spelling is fairly

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[12]Everts, Eldonna L., An Investigation of the Structure of Children's Oral Language Compared with Silent Reading, Oral Reading, and Listening Comprehension, Doctoral dissertation, Indiana University, Bloomington, 1962.

standard throughout the world, and each person represents his own speech sounds in the accepted spelling patterns.

In writing English, word patterns are represented by spelling patterns which consist of sequences of letters. Though these spelling patterns represent the word patterns, the individual letters in the sequence do not always represent the sequence of phonemes in the spoken words. In many English words the correspondence is perfectly regular, but in many others there are minor or major irregularities.

The commonest spelling pattern in English is the consonant-vowel-consonant pattern (C-V-C), with the vowel always a short vowel.[13] A great many single words and syllables in polysyllabic words follow this pattern. A number of other words such as "shed," "then," and "chip" begin with a digraph rather than a single consonant, or the final consonant phoneme may require two letters, as in "dash," "with," and "such." Blends of consonants may appear in the first or last position, as in "spot," or there may be blends in both positions, as in "brand." In some words which follow the C-V-C pattern, two letters are required to represent one phoneme, as is true of the "ck" of "back" or the double consonant of "bell." Add to this the words ending in a silent "e," which signals a long vowel sound, and the C-V-C pattern with its variations account for the spelling of hundreds of words.

For many years, schools have tended to teach the spelling of each separate word because spelling textbooks and study lists have presented words either according to some measure of difficulty or in groups of related words to be used in writing. Yet, once a child has learned to spell the two-phoneme syllable, "ing," he could discover within ten minutes that he can now spell many words, from "sing" to "bring" and "string," together with "singing," "bringing," and "stringing." Even words beginning with a silent "k" are otherwise completely alphabetic, as is true in "knack," "knife," and "knee."

Fries would teach many words through attention to significant contrasts.[14] The final silent "e" signal takes care of a large number of them. Other types of contrasts found in many words include the double "ee" in contrast to single "e," as in "red"--"reed," "met"--"meet"; "ai" in contrast to "a," as in "pad"--"paid," "plan"--"plain"; "oa" in contrast to "o," as in "got"--"goat," "sock"--"soak"; "ou" in contrast to "o" as in "bond"--"bound" and "shot"--"shout." Intensive study of the spelling of English words brings to light far more regularity in spelling than textbook makers and teachers have recognized or utilized.

At least two studies now in process are designed to discover the patterns of English spelling and the extent to which words now taught in the schools could be grouped for teaching by spelling pattern. One of

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[13]Fries, op. cit.

[14]Ibid., pp. 178-181.

these is a study by Robert Boord[15] which classifies according to spelling pattern the words in five series of spelling textbooks. The other is a very significant large-scale study by Jean and Paul Hanna[16] of the extent to which clear-cut patterns appear in large numbers of English words.

While the analysis of spelling patterns presented by Fries is pointed toward a method of teaching reading, it is at present the best help available from any linguist for the improvement of the teaching of spelling. It is to be hoped that Fries and other linguists and researchers in education will carry the work further so that from it procedures can be devised to teach spelling far more rapidly and effectively than is now the case.

Grammar for Elementary Children

In their report on Basic Issues in the Teaching of English,[17] representatives of four scholarly organizations stated:

> A knowledge of traditional English grammar is sometimes considered an intellectual discipline and a social necessity. Accordingly, over the past century, grammar has been taught in thousands of classrooms, but with little apparent effect upon the written or spoken language of many pupils. Perhaps it was naive to expect it, in terms of what we know today about the language learning process; but in any event, new approaches to this problem may be worth considering.
>
> The descriptive linguists offer one such possibility. In place of the schoolbook grammar of past generations, quite adequate for describing Latin and Greek but not so adaptable to an analysis of English, they provide a descriptive technique which attempts to achieve scientific rigor and precision by concentrating upon the contrastive patterns of form and arrangement characteristic of the structure of the language.

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[15] Boord, Robert O., Application of the Alphabetic Principle of the English Language in the Presentation of Spelling Vocabularies of Five Widely Used Spelling Series, Doctor's thesis in progress, Indiana University, Bloomington, Indiana.

[16] Hanna, Jean S., and Hanna, Paul R., Phoneme-Grapheme Relationships Basic to Cues for Improvement of Spelling, Study in progress, Stanford University, Stanford, California.

[17] The Basic Issues in the Teaching of English, Supplement to Elementary English, October, 1959, p. 9.

> . . . We must ask whether this new method offers a clue to a better correlation of the knowledge of language structure with writing ability.

Most language textbook series begin to present work in grammar at about the fourth grade level. All that is introduced in the textbooks at this level is repeated, with expansions and additions, year after year through most of high school, yet many children appear to learn little and apply less. Some of the concepts presented by various linguists offer leads to the study of the structure of English sentences which appear promising for the work of the elementary level and are well worth consideration, adaptation, and application.

With few exceptions, children master the sound system of their language and also its basic grammar before they enter school at age five or six. They bring two types of motivation on which the school can build its program of expanding and refining their use of language: they enjoy language, and they like to know how forces in their environment, including language, work.

Mentioned earlier, was the way in which pitch, stress, and juncture function in English speech. They are as much a part and as characteristic of the language as the words and the patterns of syntax. Attention to pitch and stress could well begin in the first or second grade. The class would enjoy taking an occasional sentence used by a child to test out various patterns of sound and stress. The words, "Where are you going?" asked casually, ask quite a different question than they ask when any one of the component words is pitched higher and given more stress. Children would be interested to discover that the same four words in the same sequence can ask five different but related questions. According to Lloyd and Warfel[18] experience with this phenomenon will help with both silent reading comprehension and oral reading interpretation.

Children's attention can be called also to the way in which the voice signals a question or a statement. "When are you going home?" ends with a rising intonation while the answer, "In a few minutes," ends with falling intonation. The exclamation, "Now," might be either a statement or a question, depending on the pitch employed.

The grammar that children know when they enter school has been learned intuitively. It is something they know without knowing how they learned it or where the knowledge came from. Their ears are tuned to the sentence patterns that are typical of their language. A sequence of words, such as "He gave his mother the note," will be accepted as a proper statement. If the sequence were "His mother he a note gave," they would find it amusing and unacceptable. In this sense, they can distinguish sentences from non-sentences, though they would not consider such a response as "In the basement" a non-sentence even

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[18] Lloyd, Donald J., and Warfel, Harry R., American English in Its Cultural Setting, Alfred A. Knopf, New York, 1958.

though it is structurally incomplete.

A study of three sets of language textbooks in wide use in the schools reveals that attention to definitions of a sentence and parts of speech tends to appear early. The linguists attending the project conferences expressed the opinion that definitions are more confusing than helpful and do more harm than good. Typical were definitions which stated that "a sentence expresses a complete thought," "a noun is the name of a person, place, or thing," and "a verb is an action word." None of these are helpful because they do not tell the whole story, and children come upon both oral and written sentences, nouns, and verbs which seem to them not to fit the definitions. The suggestion which came out of the conferences was that all definitions be omitted until, at a later age, they can be arrived at inductively by the children themselves.

Children's concepts of many, if not most of the things and ideas they encounter, develop without benefit of definition. A mother says to her toddler, "Get ready for bed quickly and I'll have time to tell you a story," or a kindergarten or first grade teacher says, "Let me write Sarah's sentence first and then I'll be ready for yours, John," and the children sense very quickly what a story or a sentence may be. Theirs is not a complete concept--it will have to be expanded and refined in later years--but it meets the need at the time without encumbering the children with more than they can use. Some textbooks offer children simplified or interim terms for parts of speech which only add to the confusion. Nouns are called "naming words" and verbs are called "action words," with the terms "noun" and "verb" held back until considerably later. Yet children delight in learning the proper names for things if the names are introduced in such manner that the function can be understood.

The generative grammar of Chomsky[19] as well as the work of the structural linguists contains ideas that appear applicable in the elementary school, though perhaps in unrecognizably simplified form. Building upon children's interest in manipulating language, teachers can teach a great deal about the structure of English sentences and how they can be put together and modified.

The best starting point may be a sentence a child has used (after, of course, it has been reacted to in terms of its purpose). The sentence, cut down to its basic subject and predicate, forms an irreducible minimum which can be called the kernel, nucleus, or core. The children can see that the parts of a kernel, such as "John ate," "Daddy bought," or "My dog took," must remain in their proper order if they are to make sense. But these words tell very little. To them the children can add, either as a class or individually, elements of expansion which tell what, when, where, why, and how the action takes place. These parts are movable, within limits, and the position in which they are placed influences emphasis within the sentence. Each of

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[19]Chomsky, Noam, Syntactic Structures, Gregory Lounz Book, New York, 1957.

the children in a class might build his own expansions of the kernel sentence to share them with the other pupils. One child's sentence might read, "Yesterday, while we were downtown shopping, Daddy bought a little red cart for my brother's Christmas present"; another's might be, "When we were ready to leave the farm on Saturday, my dog took a bone he found and hid it in the car."

Children of the middle grades tend to use great numbers of "run-on" sentences with several approximately coordinate parts fastened together by a multiplicity of "ands." Experience with building sentences of discernible parts, such as those in the above examples, would help them to see how some parts of what they want to say can be put into subordination so that all necessary elements are incorporated in a closely knit sentence of fewer words. The interest in manipulating words and sentences could be drawn upon to teach the process of constructing a complex or complex-compound sentence from a series of simple ones.

As the work progresses, the subject of a sentence can be expanded from "John" or "He" to such an elaborated unit as, "My big brother, John, who is married and lives in Princeton." The fact that the expanded unit is still the subject means that all the words in it must be treated as a unit and that the unit is followed by a slight pause before going into the rest of the sentence. In the course of sentence building, the words which are the sentence components can be called by their proper names as parts of speech without definition but with emphasis on function. The children can be encouraged to use the verbs, nouns, or adjectives which best paint the picture, create the mood, or describe the action they are seeking to express.

When children have learned to put together clear sentences in the active form, they can begin to learn how to turn a simple active sentence into a passive one or into a question. "The boy chased the dog" becomes "The dog was chased by the boy," with the object transferred into the subject position, the subject moved to the end of the sentence after the word "by," and a form of the verb "be" inserted before the past participle of the original verb. Children can manipulate this pattern of transformation by following a model and practicing this manipulation of parts. Likewise, the statement can be transformed into the question, "Did the boy chase the dog?" or "Was the dog chased by the boy?" Elementary grade children can learn to follow models in their transformations and can learn the reasons and the grammatical terminology later, or as needed.

It is through exposure to literature that children learn the possibilities of their language. In everyday communication, they hear the language used for utilitarian purposes. In literature they encounter it in more artistic and creative forms. While the first experience with listening to stories and poems should be for the personal joy of the experience, there are times even with young children when the teacher can call attention to a well-chosen word, a colorful expression, or an apt sentence without destroying the illusion and the children's emotional response to the piece as a whole.

Listening to the teacher's reading of good literature is especially important for the child who comes from a substandard language background. If the grammar he uses is to be improved, he must have a great deal of aural contact with the kind he is expected to learn. Rules and written drill are notoriously valueless in improving his speech, and until it is improved he will write only what he knows. The kind of language program suggested in this report should be of special value to him.

Conclusions

This brief study was undertaken to discover what concepts in the published material of some of the linguistic scholars could be adapted and utilized to improve the teaching of reading, spelling, and grammar in the elementary school. It appears that few of the linguists have given specific attention to the needs of the elementary level, yet in their offerings are ideas which appear applicable. Those which seem most promising have been set forth in somewhat informal manner in the preceding pages. Interested teachers may be able to turn some of them into actual teaching materials and procedures for trial and testing in the schools, though much work remains to be done before the ideas could be put into widespread application.

The help of the linguists is needed to provide the following services:

1. Help for teachers with understanding language in general and the present and past of the English language in particular, so that the teacher's knowledge may be used to enrich the children's experience with and understanding of language

2. A definite, approved list of the phonemes of the English language

3. A suggested order for the introduction of grapheme-phoneme correspondences in the teaching of reading, based on frequency of use and general utility in early reading

4. Guidance in teaching children to read the syntactic structures of English in reasonably systematic order, as well as the suprasegmentals of pitch, stress, and juncture

5. A definitive list of the spelling patterns used in writing English, from the most to the least regular and utilitarian

6. Help with understanding the new grammars in contrast to the grammar the teacher learned in her own schooling.

Teachers of English, linguistics, and education courses, curriculum directors, and others concerned with improving the teaching of the language arts can render the following services:

1. Pre-service and in-service courses in the English language for teachers to help them understand the history and present state of development of the language.

2. Curriculum materials and guidance for teachers to teach children at appropriate times and in appropriate ways what a language is, how it operates, and how it grows and changes

3. Study, without prejudice, of the suggestions of the linguists for the teaching of reading to determine to what extent they can be put to use in helping children learn rapidly and effectively the grapheme-phoneme correspondences they must master in order to read

4. A methodology for teaching the thinking aspect of reading and study skills built on this basis

5. Attention to motivation and the development of interest in reading as a part of whatever method of teaching is devised

6. Materials for teaching the reading process which are built on sound linguistic principles yet fit what is known of the psychology of motivation and learning

7. Curriculum materials which combine the linguists' suggestions eclectically in a variety of ways with other tested materials and methods in varying proportions and combinations

8. Literary and socially significant materials for use beyond the beginning stage which open up for children the possibilities of their language while they help them to understand progressively the syntactic structure of the language

9. A study of the spelling lists now in use in the schools to determine how and to what extent grouping by spelling patterns could accelerate the mastery of spelling

10. Reconciliation of approved spelling methodology with a new systematic ordering of spelling vocabulary

11. Curriculum materials for teaching a variety of combinations of structural and generative grammar beginning where psychologically appropriate in the first or second grade and extending progressively throughout the elementary school

12. Curriculum materials and guidance for teachers in applying all of this to the improvement of composition at all suitable points.

Needed Research

The lists of services which linguists and others can render to

the study of a linguistic approach to the language arts bristles with research needs and possibilities. Some are clearly the responsibility of the scholars and some clearly in the domain of the curriculum maker and the teacher. Much of the work can best be done by the cooperative effort of all who are interested in improving the teaching of English in the elementary school.

New materials of a variety of types need to be created and made available in each of the areas studied. There is no clear pattern for these materials, so a trial-and-error approach is inevitable. It is hoped that many teachers and many schools will create schemes of their own, based on their recognized needs and adapted to the children and the resources of the class or school. Methodology must be devised for the use of any new material, and this must be tried, evaluated, revised, and tried again continuously. Many teachers, through informal action research, can make modifications in the content and pattern of their offerings to children and through objective evaluation can improve their own work and also further the whole program of educational improvement.

A caution here is very important. Reading specialists and other educators have all too frequently made the mistake of comparing two kinds of methods or materials, one of which was well established and tested and the other was still in a nebulous, formative, or experimental stage. Nothing is to be gained by comparing a new plan with an established one until the new one has been put into such clear working order that it can be as well taught as the old by any good teacher. This may call for re-education of teachers in point of view as well as in knowledge, skills, and methodology. Also, no one experimental comparison should be accepted as definitive until it has been replicated a number of times under similar and contrasting conditions. Retardation of educational growth is the least of the dangers in premature or unscientific comparison. The greater danger is that ideas which are fundamentally valuable may be discarded because they were tested before anyone knew what to look for or where the basic values lay.

A few specific research problems can safely be suggested here. Some could be done by doctoral candidates with some background in linguistics as well as work in education. Others are better suited to linguists or specialists in reading. Some call for an interdisciplinary approach.

1. A study of the language arts curriculum of selected school systems to discover where and how concepts regarding language can best be taught.

2. A comparison of an approved list of the phonemes of the English language with the elements taught in typical phonics programs. This should include a study of the concepts of the sound structure of English taught in the phonics programs.

3. A study of dialect differences in the various dialect regions of the United States as they affect the teaching of grapheme-phoneme correspondences in reading and spelling.

4. An analysis of current reading textbooks to determine what changes would need to be made in order to present only one sound for a letter until children have mastered the basic sounds and in what order irregularities could best be introduced.

5. An analysis of current reading textbooks to determine what changes would need to be made in order to introduce progressively more complex syntactic patterns in basic reading materials.

6. A study of spelling textbooks to ascertain to what extent the vocabulary presented could be grouped by spelling pattern for rapid learning.

7. The devising, teaching, and testing of reading materials for teaching grapheme-phoneme correspondences to determine to what extent, if any, content and meaning could be included.

8. A study of possible grammatical approaches to teaching children how to construct clear, grammatical sentences.

9. A study of the extent to which children can become interested in the history and derivations of words and in the new words which are constantly being added to the language to fit new needs.

10. A longitudinal study of the effects of experience with studying about language and its structure on the quality of children's original writing.

This brief list only suggests some of the directions which can be taken in research. Each proposal will suggest many more, as will each item in the lists of services which scholars and teachers can render. What is most important is that all minds be kept open and all attitudes be kept analytical but constructive in order that no value be lost which could be applied to improving the teaching of English in the elementary school.

SELECTED REFERENCES FOR ELEMENTARY TEACHERS

Within the mass of material on language, and particularly on the English language, is some that is especially useful for teachers and leaders in the field of elementary education. The references which follow have been selected with a view to helping elementary teachers further understand the language they use and teach, so that their teaching of children may be more fruitful and effective. The references have been extensively annotated and, in some instances, the portion that most directly serves the needs of the elementary teacher has been expressly indicated.[1]

Allen, Harold B., Readings in Applied Linguistics, edited by Harold B. Allen, Appleton-Century-Crofts, Inc., New York, 1958, 419 pp.

A great deal of valuable material written by linguists and people who are endeavoring to make logical and consistent application of linguistic principles, appears in scattered periodicals. Because it is often difficult to find access to many of the articles he considered important, Allen has gathered together in his Readings a valuable collection from a number of sources. Those articles which are listed below appear of special importance for elementary school teachers:

Francis, Nelson W., "Revolution in Grammar," pp. 46-62.

This article describes a revolution, supposedly long overdue, taking place in the study of English grammar. It is the result of the application to English of methods of descriptive analysis developed through the study of other languages. Francis offers a definition of a language and basic principles on which linguistic science is based. He lists the levels through which analysis of the language moves, from sound structure to syntax, and explains and illustrates the four principal devices of form which are used in English to signal structural meanings.

Faust, George P., "Basic Tenets of Structural Linguistics," pp. 63-67.

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[1]Part of the credit for this work belongs to Robert B. Ruddell, now Assistant Professor of Education at the University of California in Berkeley, who was research assistant for the project.

Structural linguistics, Faust explains, aims to describe as accurately as possible, the characteristics of a language at a given time. Knowledge of what happens in speech enables a teacher to help students understand the ways of written English. Punctuation can be taught through helping children listen to the cadence of speech and decide their punctuation on that basis.

Faust, George P., "Terms in Phonemics," pp. 68-73.

Here Faust develops the basic tenet that speech is the primary form of language and that it underlies all writing. He gives attention to the segmental phonemes and explains and illustrates the suprasegmental phonemes of pitch, stress, and juncture.

Allen, Harold B., "The Linguistic Atlas: Our New Resource," pp. 142-149.

Because she fails to understand dialect differences in American English, many a teacher working in a language community geographically separated from her own native one, wastes the time of children attempting to make over their dialects to match her own. Differences in articulation of a few letter sounds, pronunciation of certain words, and some grammatical constructions, idiomatic expressions, or names for things may differ from one geographic region to another, yet be acceptable for that dialect if they are used by the cultivated people in the locality. Allen calls attention to the usefulness of the collection of regional studies available collectively as the Linguistic Atlas of America.

Seven articles by Sumner Ives, E. Bagby Atwood, and Raven L. McDavid, Jr., deal with specific dialectal variations in parts of the United States.

Hackett, Herbert, "Some Assumptions . . . To Be Examined," pp. 296-297.

Here are ten basic assumptions regarding language which would probably be accepted by most students of language. These assumptions are concerned with language as behavior and as a functioning tool of interaction, and they treat language as social behavior involving social responsibility.

Ives, Sumner, "Linguistics in the Classroom," pp. 298-307.

This article presents clearly the primacy of speech and its relationship to writing. Ives criticizes the present

phonics which teaches that English has five vowels and which designates long and short vowel sounds. Only speech, he says, provides the signals which convey information, since the same sequence of words can carry more than one meaning. With regard to English grammar, he holds that "the major tool which linguists can give to the teachers of composition is a true and adequate description of the forms and constructions which are used in English for the expression of grammatical meaning." The problem in teaching writing is the correlation of equivalent expressions--dialect and standard--and the substitution of standard for nonstandard forms and constructions.

Walker, A. J., "What Language Shall We Teach?" pp. 308-311.

"Language is alive and vital and changing. It is not dead and safely embalmed in rules in a textbook."

Walker says that our great purpose in a democracy is "that each person is, through us, to have access to an opportunity to learn a language that will not handicap him in finding his proper place in society." We must begin where we are with the language of the area and lead students toward a language acceptable by a national standard.

Hill, Archibald A., "Correctness and Style in English Composition," pp. 311-317.

Correctness is not logic--nor beauty. Nor is it history or the result of authoritative ruling by an individual or a book. Correctness had to do with the organization of ideas, with putting words together, so as to convey meaning easily and correctly. Hill compares style in the use of language with good table manners in eating. The article presents many examples of errors or poor style in composition and indicates the relation to dialect and the problem presented.

Carroll, John B., "Psycholinguistics and the Teaching of English Composition," pp. 319-326.

Carroll expands and makes suggestions on seven points basic to the satisfactory writing of a composition. He gives special attention to ways of helping children write grammatical sentences.

Lloyd, Donald J., "The Uses of Structure and the Structure of Usage," pp. 326-331.

Teachers have an obligation, Lloyd says, to help

children understand the methodical ordering of segmental phonemes, pitches, stresses, and junctures, and that these are the building-blocks of human speech. Early drill on these patterns of common talk and extensive, "lightly guided" individual reading would help children become efficient readers. Textbooks are needed for spelling and reading designed to teach the structural organization of English speech.

The grammatical usage a child expresses in school is the product of his environment and associations, and his feelings and emotions are closely involved. Lloyd recommends that teachers follow the plan of the foreign-language class, attempting to supplement, not to dislodge, any poor speech habits a child has acquired. Children need to understand the social significance of usage.

Bloomfield, Leonard, Language, Holt, Rinehart and Winston, New York, 1933, 364 pp.

This book is included here because it is a landmark in the development of modern linguistic science, not because of its direct offering to elementary teachers. Much of the book deals with the historical development of linguistics, the use of language, speech communities, and the languages of the world. The final chapter on "Applications and Outlook" calls attention to the unfortunate attitude toward usage that is fostered by the schools through the authoritarian teaching regarding "good English." Here, as in others of his writings, Bloomfield expresses his conviction that progress to literacy is seriously hindered in our schools by the ignorance of educators regarding the relation of writing to speech. Reading textbooks, he states, are a mere hodge-podge of graphic forms with no rational progression. Phonics schemes are complicated by "the crassest ignorance of elementary phonetics." The inconsistent orthography of English makes spelling difficult and greatly delays elementary education. One way to solve the problem would be to teach children to read a phonetic transcription; and then, after the essential reading habit has been set up this skill would be transferred to the reading of conventional writing. (This presages Sir James Pitman's Initial Teaching Medium--the augmented Roman alphabet!)

Bloomfield, Leonard, and Barnhart, Clarence L., Let's Read, Wayne State University Press, Detroit, 1961, 465 pp.

In this book, Barnhart presents a scheme for teaching reading based on the earlier work of Bloomfield. The scheme, as Bloomfield designed it, presents words in a systematic progression arranged according to symbol-sound correspondences, beginning with one-to-one correspondence and

progressing to increasing levels of irregularity. Reading alphabetic writing requires that one have "an ingrained habit" of producing the phonemes of the language in response to seeing the written marks which conventionally represent these phonemes. In contrast to the prevailing concept of teachers of reading that reading and obtaining meaning are one indivisible process, Bloomfield states that a person who can read aloud a text but cannot reproduce the content or show a grasp of it lacks something other than reading power and should be taught the proper response to language.

Regarding dialectal pronunciation in reading, the authors hold that the only pronunications that are not acceptable are those which are not accepted by the educated people in the locality.

A sequence of lessons is included, beginning with the capital and lower case letters of the alphabet and proceeding, through word lists and simple unrelated sentences, to brief story content.

Carroll, John B., The Study of Language, Harvard University Press, Cambridge, 1959, 289 pp.

This is a comprehensive book which lives up to its subtitle: The Survey of Linguistics and Related Disciplines in America. While there is value to teachers in the definitions in the first chapter and the concept suggested later regarding language development in children, the greatest values for elementary teachers lie in Chapter 6, "Language and Education." Here Carroll lists seven points to which he gives attention in his discussion of the language arts in the elementary school. He calls attention, as do all linguists, to the primacy of speech and the need for acquaintance with the phonemic structure of the language and its relation (or lack of it) to orthography as a preparation for the teaching of reading, writing, and spelling. Teachers need an awareness of the dynamic character of a language system and of its changes through time and space as a background for the teaching of grammar and usage. He is cognizant of the need for attention to the individual needs and abilities of pupils as a basis for the adaptation of instruction to individual differences.

Here, on pages 140-168, is a great deal of material to challenge the thinking of elementary teachers.

Chomsky, Noam, Syntactic Structures, Mouton and Company, The Hague, The Netherlands, (Reprint) 1962, 118 pp.

Chomsky writes for linguistic scientists, not for the layman, and his contribution is perhaps more easily

understood through his interpreters. He suggests that we simplify the description of English through limiting our description "to a kernel of basic sentences (simple, declarative, active, with no complex verb or noun phrases)" and derive other sentences from these by transformation. A greatly simplified application of his basic idea of grammatical transformation is expressed in the preceding material on grammar. Two articles by Owen Thomas[2] are helpful to students who wish to understand Chomsky's utilization of the kernel sentence as the starting point for the generating of more expanded and elaborated sentences.

Francis, W. Nelson, The Structure of American English, The Ronald Press Company, New York, 1958, 614 pp.

For anyone interested in the basic contribution of structural linguistics, here is an important resource. It is written as a basic text and deals systematically with the structure of language--phonetics, phonemics, morphemics, grammar, and syntax. The relationship of language to writing is clearly delineated. There is material here which would be helpful to all teachers who want to help children understand language and writing. Syntactic structures, writing systems, and punctuation all receive attention. A chapter by Raven L. McDavid, Jr., deals with "The Dialects of American English."

This is a long book but a comprehensive one for teachers of English in elementary and secondary schools as well as for college students.

Fries, Charles Carpenter, Linguistics and Reading, Holt, Rinehart and Winston, Inc., New York, 1963, 265 pp.

In this book, Fries applies to the teaching of reading in the elementary school his years of research into the structure of English and the teaching of English as a foreign language. In a historical study of the teaching of reading, he finds reading specialists completely ignoring or misunderstanding "(a) the nature of the various types of signals which constitute language in general and the English language in particular, and (b) the actual structural significance of the alphabet in comparison with other writing systems." He sketches the development of linguistics and offers evidence of the contributions of the field to elementary teaching of the language arts. His analysis of English

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[2]Thomas, Owen, "Generative Grammar: Toward Unification and Simplification," The English Journal 51:94-99, 113, February, 1962; Thomas, Owen, "Grammatici Certant," The English Journal 52:332-336, May, 1963.

spelling is particularly valuable. Last of all, he offers a logical scheme for the teaching of reading through which children can be taught, step by step, to respond with speech to the graphic symbols of the language. Phonemes are presented only in words, never in isolation, and the sequence begins with regularly spelled words, in which sound and symbol have a one-to-one correspondence, and proceeds to the irregularly spelled patterns of the language. This book will be widely discussed and will certainly lead to a great deal of experimentation.

Gleason, H. A., Jr., An Introduction to Descriptive Linguistics, Holt, Rinehart and Winston, Inc., New York, (Revised edition) 1961, 503 pp.

Gleason calls descriptive linguistics "the science which attempts to understand language from the point of view of its internal structures." A general discussion of language is presented at the outset, followed by attention to English consonants, vowels, stress, and intonation. Later chapters discuss the morpheme and English morphology, syntactic devices and transformations, grammars, and writing systems.

This book is widely used in college courses on descriptive or structural linguistics. Gleason draws upon his wide knowledge of languages to illustrate and reinforce basic points.

Hall, Robert A., Jr., Sound and Spelling in English, Chilton Company, Philadelphia, 1961, 34 pp.

This pamphlet provides one of the best analyses we have of the sound system of English and of the patterns of English spelling. Hall's analysis of the phonemes and graphemes of English does not entirely satisfy all linguists, but it is as complete and valuable as any available. It forms an excellent starting point for further studies of regularity and irregularity in English spelling and should be helpful in setting up graded schemes of sequence for teaching spelling in the grades.

Lloyd, Donald T., and Warfel, Harry R., American English in Its Cultural Setting, Alfred A. Knopf, New York, 1956, 553 pp.

The authors state at the outset of this writing that, although they are not linguistic scientists, their objective has been to study the findings of the specialists and then apply them to the problems of reading and writing in English. The text is developed around six general topics: (1) language, man, and society--the historical development of the

English language and various factors influencing it; (2) how our language works--word patterning in the English language and various word groups which operate within these patterns; (3) how we sort our words--the word classes of the English language and their operation within the sentence; (4) how we form our sounds--the phonemes of the English language and a discussion of the utilization of morphemes and syntax; (5) how we write--the system of writing, spelling, typographical devices and punctuation; and (6) the arts of reading and writing--the utilization of structures in reading and writing. The discussion is concluded by pointing to the vital relationship between effective use of the English language and life in our society.

Parts 1, 4, 5, and 6 contain ideas many elementary teachers might like to test in their classrooms. The concept of reading by structures merits extensive experimentation. The statement that "the real problems of writing are structural and must be approached through structures" also needs study for verification. Some of the recent studies mentioned earlier, particularly those of Strickland and Ruddell, seem to point in this direction.

Malmstrom, Jean, and Ashley, Annabel, Dialects--U.S.A., National Council of Teachers of English, Champaign, Illinois, 1963, 62 pp.

Though English is the language of the United States, there are different dialects of American English. The teacher from the Midwest who moves to New England or the South finds differences in pronunciation, vocabulary, and grammar which she must recognize and understand in fairness to children. All children in the United States are taught standard English at school. An adult's dialect tends to reflect the length of time he has spent in school, but regional differences appear in the standard English of cultivated speakers. Some of the literature that teachers share with children illustrates regional dialects, as do the poems of Robert Frost, James Whitcomb Riley, Paul Lawrence Dunbar, and Jesse Stuart. Words borrowed from the American Indians are used throughout the country, the Southwest uses many words of Spanish origin, Pennsylvania Dutch adds its flavor to several regions of the country, and the Scandinavian languages and German have influenced other areas. Teachers who understand the dialects they find will know what to correct as substandard, what to appreciate, and how to tell the difference.

Roberts, Paul, English Sentences, Harcourt, Brace and World, Inc., New York, 1962, 294 pp.

This is the only contribution which contains material

of direct value for elementary school teaching. Roberts has been working for a number of years on the application of structural linguistics to the teaching of grammar in the high schools. In this book he draws upon the work of Chomsky and adapts what he finds in transformational or generative grammar to the task of helping young people understand the structure of English sentences. A number of sixth grade teachers are finding material in this book that is useful in teaching younger children. Roberts gives attention to basic sentence patterns and means of expanding them and to problems of sentence fragments, run-on sentences, and ambiguity, including consideration of punctuation, spelling, and other writing problems.

Smith, Henry Lee, Jr., Linguistic Science and the Teaching of English, The Inglis Lecture, Harvard University Press, Cambridge, Mass., 1956, 61 pp.

Here is a clear and readable exposition of the basic understandings about language that should underlie all teaching of English. Specific content ranges from the need for a more complete understanding of the alphabetic principle to the problem of "standard" pronunciation in geographic areas. Smith is concerned over the failure of reading specialists to understand the actual reading process and the sound structure of the language. The linguist sees reading primarily as "a systematic approach to the relationship between the sound and letter," whereas the reading teacher sees reading as a means to gain meaning from the printed page. Both are right; reading is more than just a skill, but the lack of systematic knowledge about the relationship between the language system and the derived symbolic writing system makes the end the educator and linguist both seek very difficult to attain.

Reading specialists and elementary teachers should read this little book for what it offers of help with understanding the structure of English and thus of help with the teaching of reading, spelling, and grammar.

Whitehall, Harold, Structural Essentials of English, Harcourt, Brace and World, Inc., New York, 1956, 154 pp.

Whitehall presents a general structural design of English. He discusses basic differences between writing and speech and depicts serious written English as "a rather artificial dialect" of the language. He describes the grammar of the English language in terms of word-groups, sentences, modification and shift of emphasis, connectives, the verb system, punctuation, spelling, and word formation. Illustrations of the principles he discusses make each point clear. The appendix provides a brief sketch of the development of the English language.

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APPENDIX A

CONFERENCE PERSONNEL--SEPTEMBER, 1962, AND MAY, 1963

Grace Champion, Supervisor, Louisville Public Schools
Muriel Crosby, Assistant Superintendent, Wilmington Public Schools
W. Nelson Francis, Professor, Brown University
H. A. Gleason, Jr., Professor, Hartford Seminary Foundation
Fred W. Householder, Professor, Indiana University
Leonard Newmark, Professor, Indiana University (September Conference only)
Ruth G. Strickland, Project Director
Robert B. Ruddell, Assistant Project Director
Doris Andres, Project Secretary

CONFERENCE PERSONNEL--MARCH, 1963

Rowannetta S. Allen, Assistant Superintendent, Prince George's County Schools
Althea Beery, Director of Elementary Education, Cincinnati Public Schools
Grace Champion, Supervisor, Louisville Public Schools
Edna Hedger, Principal, Clover Drive School, Great Neck
Daisy M. Jones, Supervisor, Richmond Community Schools
Lillian Paukner, Supervisor, Milwaukee Public Schools
Dorothy J. Welch, Supervisor, Long Beach Unified School District
Ruth G. Strickland, Project Director
Robert B. Ruddell, Assistant Project Director
Doris Andres, Project Secretary

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BULLETINS IN THE FIELD OF EDUCATION
INDIANA UNIVERSITY

The Bulletin of the School of Education, Indiana University, was first published in 1924 and has appeared regularly since that time. A complete list of bulletins may be obtained from the School of Education upon request. The studies included in the present volume and in the two volumes immediately preceding it in date are listed below. Unless otherwise indicated, these may be obtained for $1.25 each from the Indiana University Bookstore, Bloomington, Indiana.

Volume 38 (1962)

1. Massialas, Byron G., Research Prospects in the Social Studies, 48 pp.

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6. Long, Nicholas J., and others, Groups in Perspective: A New Sociometric Technique for Classroom Teachers, 112 pp.

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Volume 40 (1964)

1. Strickland, Ruth G., A Study of the Contribution of Structural Linguistics to the Teaching of Reading, Writing, and Grammar in the Elementary School, 44 pp.